

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P929906

Luminaire Tested: DFN2DS-4P3F0-050DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929906
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-4P3F0-050DS930-RLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

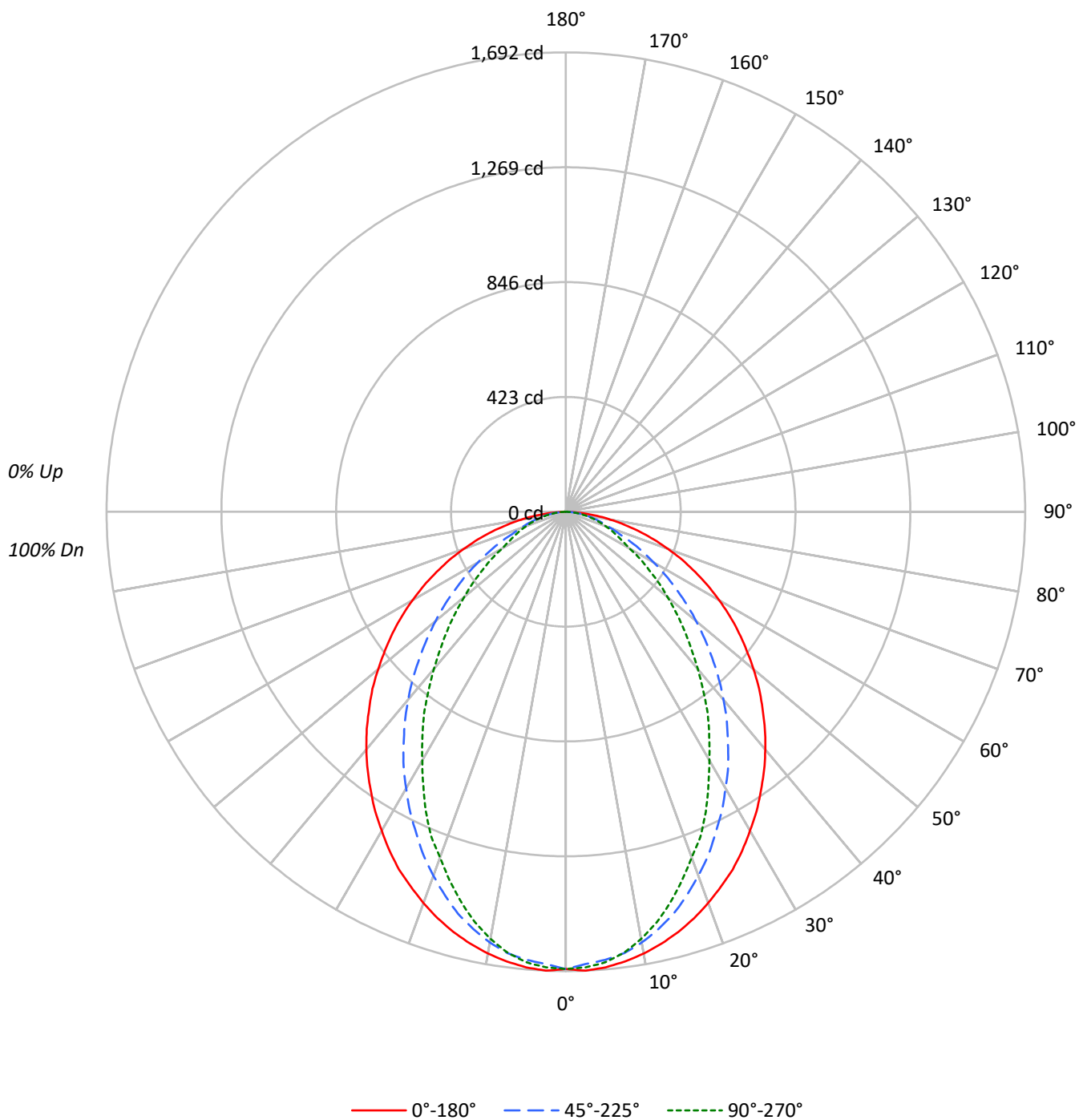
Lumens per Lamp: N/A
Luminaire Lumens: 3463.8 lumens
Efficiency: N/A
Efficacy: 66.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 51.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P929906

CATALOG NUMBER: DFN2DS-4P3F0-050DS930-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P929906

CATALOG NUMBER: DFN2DS-4P3F0-050DS930-RLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1919	1919	1919
5°	1927	1895	1906
10°	1912	1864	1848
15°	1890	1809	1757
20°	1859	1730	1643
25°	1828	1641	1533
30°	1785	1548	1392
35°	1743	1448	1268
40°	1701	1345	1125
45°	1651	1228	995
50°	1600	1111	867
55°	1547	984	745
60°	1487	851	618
65°	1418	715	563
70°	1336	589	518
75°	1235	537	483
80°	1090	480	440
85°	856	378	378

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1651 cd/sqm

TEST NUMBER: P929906

CATALOG NUMBER: DFN2DS-4P3F0-050DS930-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.8	4.6
10°-20°	433.3	12.5
20°-30°	608.4	17.6
30°-40°	663.2	19.1
40°-50°	609.5	17.6
50°-60°	478.7	13.8
60°-70°	311.6	9.0
70°-80°	160.4	4.6
80°-90°	40.9	1.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1199.5	34.6
0°-40°	1862.7	53.8
0°-60°	2950.9	85.2
0°-90°	3463.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3463.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1684	1684	1684	1684	1684	
5°	1684	1677	1657	1670	1666	160
15°	1602	1585	1533	1504	1489	451
25°	1454	1405	1305	1242	1219	669
35°	1253	1175	1041	945	911	784
45°	1024	922	762	654	617	791
55°	779	660	495	404	375	696
65°	526	402	265	213	209	521
75°	280	174	122	111	110	297
85°	66	34	29	29	29	79
90°	0	0	0	0	0	

TEST NUMBER: P929906

CATALOG NUMBER: DFN2DS-4P3F0-050DS930-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1684.2	1684.2	1684.2	1684.2	1684.2
2.5°	1691.8	1684.2	1667.4	1682.7	1679.6
5°	1684.2	1676.6	1656.7	1670.4	1665.9
7.5°	1670.4	1661.4	1640.0	1646.1	1638.4
10°	1652.2	1641.5	1611.1	1606.4	1597.3
12.5°	1629.3	1615.7	1574.4	1565.4	1548.5
15°	1601.9	1585.1	1533.3	1504.4	1489.2
17.5°	1569.9	1545.5	1481.4	1447.9	1423.5
20°	1533.3	1502.8	1426.6	1388.6	1354.9
22.5°	1493.7	1458.6	1370.2	1318.4	1295.6
25°	1454.0	1405.2	1304.7	1242.2	1219.2
27.5°	1406.9	1354.9	1243.7	1172.1	1137.0
30°	1356.6	1298.5	1176.6	1098.9	1057.7
32.5°	1307.7	1237.6	1112.7	1021.2	983.1
35°	1252.9	1175.1	1041.1	945.0	911.4
37.5°	1199.5	1115.7	974.0	868.7	830.7
40°	1143.1	1051.8	903.8	795.6	756.0
42.5°	1085.3	987.7	833.7	720.9	682.9
45°	1024.3	922.1	762.1	653.8	617.2
47.5°	966.3	858.2	693.6	585.3	551.8
50°	902.4	794.1	626.5	521.2	489.3
52.5°	839.8	725.4	562.4	461.9	432.9
55°	778.8	659.9	495.3	403.9	375.0
57.5°	716.4	594.5	435.9	350.6	326.2
60°	652.3	530.4	373.4	295.8	271.3
62.5°	589.9	468.0	320.1	246.9	234.8
65°	525.8	402.4	265.2	213.4	208.8
67.5°	464.9	341.4	213.4	187.4	182.9
70°	400.9	282.0	176.8	161.5	155.4
72.5°	339.9	227.1	147.8	135.7	132.6
75°	280.4	173.7	121.9	111.2	109.8
77.5°	221.0	123.4	96.1	89.9	86.8
80°	166.1	88.4	73.1	67.1	67.1
82.5°	115.8	59.5	50.3	47.2	47.2
85°	65.5	33.5	28.9	28.9	28.9
87.5°	24.4	12.1	12.1	10.7	10.7
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P929906

CATALOG NUMBER: DFN2DS-4P3F0-050DS930-RLL

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	13.50	15.02	13.87	15.34	15.65	9.46	10.98	9.83	11.30	11.61
	3H	15.27	16.63	15.64	16.96	17.32	10.73	12.09	11.10	12.42	12.78
	4H	15.93	17.21	16.33	17.56	17.94	11.23	12.51	11.63	12.86	13.24
	6H	16.42	17.60	16.83	17.97	18.36	11.61	12.79	12.02	13.16	13.55
	8H	16.59	17.71	17.01	18.10	18.50	11.73	12.86	12.16	13.25	13.65
	12H	16.69	17.77	17.12	18.15	18.58	11.81	12.89	12.24	13.27	13.70
4H	2H	13.60	14.88	14.00	15.23	15.61	10.16	11.44	10.56	11.79	12.16
	3H	15.54	16.60	15.95	17.00	17.40	11.60	12.66	12.01	13.06	13.46
	4H	16.29	17.24	16.72	17.66	18.10	12.20	13.15	12.63	13.57	14.01
	6H	16.88	17.71	17.34	18.15	18.61	12.69	13.52	13.14	13.96	14.42
	8H	17.09	17.87	17.56	18.31	18.78	12.85	13.63	13.31	14.07	14.54
	12H	17.25	17.94	17.73	18.42	18.89	12.96	13.66	13.45	14.14	14.61
8H	4H	16.31	17.09	16.77	17.53	18.00	12.55	13.33	13.02	13.77	14.24
	6H	16.95	17.59	17.45	18.08	18.56	13.14	13.78	13.64	14.27	14.75
	8H	17.20	17.78	17.71	18.29	18.77	13.36	13.94	13.87	14.45	14.93
	12H	17.40	17.91	17.91	18.40	18.97	13.54	14.05	14.05	14.54	15.10
12H	4H	16.30	16.99	16.78	17.47	17.94	12.60	13.29	13.08	13.77	14.24
	6H	16.93	17.51	17.44	18.02	18.50	13.20	13.78	13.72	14.29	14.78
	8H	17.21	17.72	17.72	18.22	18.78	13.48	13.98	13.98	14.48	15.04